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OCTOBER 1984 THE NAVAL AVIATION SAFETY REVIEW



Results of the 1984 Approach Reader Survey

The staff of Approach would like to thank all of you who took the time to fill out and mail in one of the reader surveys we ran in our May '84 issue. We read those inputs carefully and they will help guide the editorial policies of the magazine for the next year. It is unfortunate we didn't get more of them back; out of the approximately 13,000 issues we sent out in May, only a few hundred surveys were returned.

Most of the replies we did get were from junior flying officers and senior enlisted maintenance types. Almost all said they like Approach and read it every month. While few respondents claimed that an article directly saved them from a mishap, most who commented felt that the magazine is responsible for an increased safety awareness which continually keeps everyday incidents from becoming mishaps.

The best liked Approach articles were, as always, the first person narrative, non-fiction, airborne emergency articles submitted from the fleet, also known as the "There I Was . . ." story. Surprisingly though, technical articles, such as those on windshear, birdstrikes and physiology ran a strong second. The least popular type of article was the management/philosophy article, also known as "Preaching to the Choir."

Survey respondents felt Approach was remiss in not printing enough flight gear articles. Hit Alfa. We'll work on it. They also felt we backed off from some controversial topics such as command responsibility in safety, the lack of money for safety items, and safety versus operational commitments. Hit Bravo. I agree wholeheartedly, but I can assure you we are always doing as much of that as we can, if you get my drift.

A common complaint on the surveys was "You don't print enough (fill in your aircraft type) articles." To that I say, "OK, write me a good (fill in your aircraft type) safety article and I'll print it." Our only bias here is for current U.S. Navy and Marine Corps aircraft. Beyond that, it's the communities who write the most that get the most coverage.

The bottom line is that Approach is your magazine. You, the readers, write most of the articles and have the opportunity to influence its editorial policies. I see that as Approach's greatest strength and I hope you will continue to support that ideal.

Lt. John M. Flynn
Editor

inside approach

Vol. 30 No. 3



An SH-2F Seasprite of HSL-32's DET 6 makes an approach to a Spruance-class destroyer. Photo by PH3 Roger S. Frazier.

● FEATURES

Desert "Carrier Deck" Saves Lives 2

By Mickey Strang. Fighting flattop fires in the desert is a hot job.

It's Not a Job, It's an Adventure 8

From Pacific Missile Test Center. Technical failures plus "weather" increase challenge.

A Comedy/Tragedy of Errors 10

By AFCM Steve Malina. Discrepancies galore lead to a mishap.

How Much Gas Do You Really Have? 11

By Lt. Steve Frink. Reading gauges only can be deceptive.

Will Your "Rollers" Be Down? 14

Anonymous. Wheels down should be No. 1 priority on landing checklists, but it isn't.

"Please Look Out the Window" 15

By Lcdr. G.R. Murchison. Perfect weather forecast? Have an alternate anyway.

A Toast to Wing Wearers 16

By Lt. Jerry Linenger. Even dining out can be dangerous!

So . . . How Do You Like It So Far? 18

By Ltjg. K.C. Hutchinson. A sickening, loud metallic bang can signal a punch out.

Playing by the Rules 20

By Ltjg. Tom Taylor. Wargames are no excuse for slackening up on safety.

Standard Approach Brief and Backup, Please 21

By Lt. B.A. Cosgrove. Professionalism in flying is a continuous learning process.

"Ghoulies and Ghosties" and Things That Could Bump in the Night . . . 24

By Lt. Daniel S. Dealy. There might be something out there.

"Oscar" Is SAR Star 26

By Bud Baer. Continuously "victimized" in SAR practice, he never complains.

Just a Quiet Day Around the Hangar 28

By Lcdr. Brendan J. O'Connell. They kept an incident from becoming a disaster.

On Rituals, Phobias and Preflights 29

By Lcdr. Dave Youngblood. "I'm sure I checked everything — but did I?"

FOD for Thought 30

By Peter B. Mersky. Lost, misplaced things can become lethal in the cockpit.

Gethomeitis 32

Anonymous. This end-of-deployment disease could delay your arrival — permanently.

● DEPARTMENTS

Air Breaks	6
Anymouse	12
Bravo Zulu	22

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Desert "Carrier Deck" Saves Lives

By Mickey Strang
Naval Weapons Center

Firefighters Ken Carter and Charles Sukiasian leave a debris pile on the mini-deck after igniting a running fuel fire. The blaze will be extinguished by new fire fighting equipment being tested.





Bob Darwin, director of fire protection for the Naval Material Command, dictates a report on the fire test that he is watching at the mini-deck.

UNTOLD numbers of naval aviators and flight deck crewmen owe their lives and safety to tests performed at a small facility on the giant Naval Weapons Center (NWC), China Lake, Calif.

Located on the Crosswind Firing Range of this Mojave Desert establishment is a mockup of an aircraft carrier flight deck, known officially as the Aircraft Carrier Conflagration Control Facility, but usually referred to as the mini-deck.

Since it was built in 1970, the majority of Navy tests of firefighting equipment, agents and techniques have taken place at the mini-deck, and the realistic conditions that this facility can provide ensure that the results will be applicable to conditions found at sea on actual aircraft carriers.

Robert Darwin, director of fire protection for the Naval Material Command, says that "providing adequate firefighting capability on the flight deck of aircraft carriers is

The P-16 fire fighting vehicle speeds to a burning aircraft on the mini-deck.



Three China Lake firefighters use a hand-held hose to extinguish a three-dimensional fire in the mockup of an aircraft.

one of the most challenging endeavors in the fire protection profession.

"Developing of specialized equipment for the flight deck is a long evolutionary process from concept development to actual prototype testing." He continues, "Over the years, the mini-deck has played an essential role in this process by serving as a site for large scale fire tests and prototype checkout in a simulated flight deck environment.

"Every one of the primary firefighting tools now in use on aircraft carrier flight decks (the P-16 fire truck, Aqueous Film Foaming Foam (AFFF) hose lines, the AFFF flush deck and deck-edge nozzle systems) were originally proof-tested on the mini-deck.

"It is ironic," Darwin concludes, "that a small hunk of sand, concrete and steel in the middle of the Mojave Desert has done so much to save lives and property on the high seas."

After two especially disastrous fires in the late 1960s — those on the flight decks of the aircraft carriers USS *Forrestal* and USS *Enterprise* — the Naval Air Systems

Command formed a Carrier Aircraft Support Study (CASS) group to review methods and equipment being used in the fleet and to evaluate methods by which firefighting agents were transported and carried to the carrier deck.

Since no carrier could be spared for such testing — and testing at sea would also be particularly hazardous — a land facility to do such testing was chosen.

NWC was tasked to evaluate the effectiveness of several means of delivering firefighting agents to aircraft carrier decks: flush deck nozzles, monitors and vehicles with articulated booms. Also to be evaluated were methods of extinguishing fires and of cooling inert ordnance suspended from aircraft mockups. (The devastation of carrier deck fires had resulted in large part from the "cooking off" of ordnance on aircraft parked on the deck.)

The initial facility constructed by NWC consisted of a 36-by-64-foot simulated flight deck built of ¼-inch steel plates. This facility was used to verify test concepts and construction methods.

The capability to test techniques and methods of firefighting under controlled conditions was considered so valuable that a permanent facility was constructed and has now been in use for more than a decade.

While the majority of recent tests have been under the direction of the CV Firefighting Flag Level Steering Committee, Naval Material Command, Naval Sea Systems Command and Naval Research Laboratory, both the Air Force and the Coast Guard have also sponsored work at the Navy facility.

The mini-deck consists of an 83- by 125-foot simulated flight deck made of heat-resistant concrete. An elaborate array of selectable, liquid-spray nozzles is built into the deck and connected to an underground remotely controlled firefighting agent distribution system.

Providing the wind to simulate actual deck conditions is a permanently emplaced, overage C-97 cargo aircraft, whose propellers can send a controlled airflow of up to 40 knots across the mini-deck.

Supporting facilities include a 146,000-gallon storage and distribution system for water of firefighting agents, a 3,500-gallon jet fuel storage and distribution system, which can be augmented by direct pumping from 5,000-gallon fuel delivery trucks and a variety of instrumentation.

Instrumentation at the facility includes cameras, heat and temperature sensors, recording equipment and anemometers, with additional instrumentation available as needed. NWC also provides computer assistance for data reduction, when required. Both motion picture and video camera crews are on hand to film tests for further study.

Special structures are often built to meet test needs. For

instance, in a recent test series, a platform with height readily adjustable was constructed to serve as a base for firefighting monitors. These tests were used to determine if a monitor to fight carrier deck fires should be built on the island (the carrier's superstructure) and, if so, where such a monitor could most effectively be emplaced.

Mockups of aircraft or frames of overage craft used on the mini-deck, and small concrete block sheds or debris piles are also constructed for the study of three-dimensional fires.

As well as the physical facility, NWC also provides the in-depth expertise required for such essential work.

All tests at the mini-deck use the skills of the China Lake Fire Division personnel, civilians employed by the Center's Safety and Security Department. Their knowledge is called upon for planning, conducting and evaluating the full range of tests.

Darwin, Edwin (Jake) Jablonski of the Naval Research Laboratory and others from both the Naval Material Command and NRL are quick to state that this expertise is



The last of the flames on a burning aircraft used during fire equipment tests is extinguished.



Firefighters clean up the foam from the mini-deck following a test. In the background is the overage transport whose propellers create the "winds" required for simulated carrier deck fires.

as vital to meaningful testing as the facility itself.

In addition, the other skills required to build instrumented test facilities abound at this large desert base, the Navy's largest research, development, test and evaluation complex.

Because conditions at the mini-deck can be carefully controlled, comparisons of various methods of fighting fires or of equipment can be made without hazard to the safety of firefighters involved.

For instance, recent nozzle tests evaluated the effectiveness of varying rates of flow in dousing conflagrations of debris pile fires. As well as the varying amounts of water and firefighting agents flowing from these nozzles (from 6,000 to 12,000 gallons per minute), varying wind conditions were also used to determine if this made a difference and whether sending a stream crosswind lessened the effectiveness of the varying flow.

Other recent tests involved determining the amount of heat that ordnance would be exposed to at varying distances

from the types of fire that could be expected on a carrier deck. Heat sensors for this test series stretched many yards off the sides of the mini-deck, something that would be impossible at any other than a land facility.

The safety of personnel involved in the testing is a prime consideration and is ensured by the care and expertise of the NWC firefighters whose years of experience enable them to recognize undue hazards. Additional firefighters/emergency medical technicians stand by whenever any flames are set off at the mini-deck. Such care and expertise also makes possible the testing of hand-held hoses and protective equipment for firefighters.

While the center's naval aviators are fiercely protective of the clear desert skies for their weapon testing and evaluation, they have never voiced objections to the puffs of black smoke that rise above the mini-deck periodically. They recognize that those puffs of smoke indicate another test series is underway to enhance their safety. ◀

Watch Your Language. Two A-6Es taxied to the active runway at a Norwegian airbase, with 1,000 feet separation. All squadron aircrews had been briefed by the Norwegian liaison officer that takeoffs would be made from Runway 26, with landings on 08. The tower instructed the lead Intruder to taxi to "holding position," which the crew misinterpreted to mean "taxi into position and hold," the standard ATC phrase for going out onto the runway, lining up on the runway heading and waiting for specific permission to take off. The second A-6 held short of the runway. Suddenly, a third A-6 passed overhead at an altitude of 50 feet AGL, narrowly missing the plane on the runway. The airborne aircraft had been on a GCA for runway 26, and the pilot, not having enough time or altitude to go around, added power to slow his rate of descent and landed ahead of the A-6 on the runway.

This potentially costly incident had been created by the aircrew misunderstanding of the foreign tower operator's phraseology, as well as complacency brought about by the assumption that landings would not be made on Runway 26 — as they were told. Both departing aircrews felt weather was not a factor, and the second A-6 crew stated they were prepared to follow the first aircraft onto the runway. Not bothering to thoroughly check the landing corridor prior to taking the runway, even with "assumed" tower clearance, also contributed to the situation.

This incident reinforces the basic doctrines of "see and avoid," "don't assume anything!" and if in doubt (particularly in a foreign environment), ask for the instructions to be verified.

Alternobaric Vertigo. It was a clear, sunny day. A section of A-4s was passing rapidly through 8,000 feet on climbout when the wingman became dizzy and disoriented. The sky seemed to be spinning around him as he felt a sharp pain in one ear. He declared an emergency, and his lead brought him back to the field for an uneventful landing.

The diagnosis? Alternobaric vertigo, a disorientation brought on by rapidly changing barometric pressure. The pilot in question had just recovered from a cold for which he had been taking medication, but he was legally "up" on the flight in question. This undoubtedly contributed to the situation, but the quick climbout triggered the sudden reaction. The moral? Be aware of this phenomenon and watch out for it, especially when you may not be at your peak physically.

Helo Hydraulics Lost. During a personnel hoisting evolution from the fantail of USS *Richmond K. Turner* (CG 20), Lcdr. Rich Black, the HAC of HSL-34 DET One's SH-2F, felt intermittent kicks in the aircraft's flight controls, followed by a momentary loss of hydraulic boost pressure. The hoisted passenger was within five feet of aircraft entry. Having no apparent degradation in hoist capability, Black elected to continue the hoist cycle. Aircrewman AWC Bean safely secured the passenger aboard while Black departed USS *Turner* for his parent ship, USS *W.S. Sims* (FF 1059).

During the waveoff, the flight control inputs increased in amplitude and frequency coinciding with gauge fluctuations. Copilot Lt. Anderson assisted by disengaging the hydraulic boost system and notified the *W.S. Sims* of the inflight emergency.

The main landing gear was lowered by freefall and pinned. Bean informed and briefed the three passengers regarding the emergency while the *Sims* swiftly manned flight quarters and provided a green deck. Prior to final, complete hydraulic pressure was lost. Black executed a flawless hydraulic boost off landing followed by an uneventful shutdown. Investigation revealed a ruptured hydraulic line.

X-Winged F-14 Lands Safely. Lt. Dennis Broska and Lt. Chuck Lewis of VF-51, the "Screaming Eagles," have joined the small but elite group of F-14 aircrew to fly the Tomcat in the "X"-wing configuration.

The crew manned their aircraft to participate in air combat maneuvering exercises. Things looked good as they commenced their initial vector on three bogeys 30 miles away. As Broska accelerated the Tomcat through 400 knots, the aircraft experienced heavy airframe buffet and required increasing amounts of lateral stick to maintain a wings-level attitude. Lewis transmitted their intention to knock off the engagement as Broska slowed the aircraft and gained altitude to investigate the problem.

No cockpit indications helped; however, a visual inspection revealed wing sweep asymmetry. The right wing was positioned at 38 degrees and the left wing at 25 degrees. This was confirmed by their wingman's visual inspection. Releasing stick pressure caused the aircraft to roll inverted. There are no NATOPS procedures to cover this emergency, so Broska and Lewis relied on information they had read of this nature that was published in *Approach* magazine (X-Winged Tomcat, April, 1983, and X-Wing

AIR BREAKS

Fighter . . . Again, July, 1983) and NAVAIRSYSCOM messages.

Declaring an emergency, they commenced a cautious return to base. To prevent any further asymmetry, the wing sweep drive circuit breakers were pulled. In preparation for an arrested landing, the aircraft was slowed to determine the approach speed that allowed greatest controllability. By extending the maneuvering devices, an approach speed of 158 knots was established. To increase stability, Broska used rudder trim into the left wing. A perfect approach was flown to a short field arrestment.

Can simulators kill you? A seminar was held recently at Navy Postgraduate School in Monterey on "simulator-induced syndrome," a phenomenon that even the docs admit they know little about. It seems that several aircrew have reported severe nausea, dizziness, vertigo and other symptoms during and after simulator flights. These symptoms have been known to subside and then recur hours later for no apparent reason. Indications are that this is more than simple motion sickness and that it could have adverse effects on aircrew flying after simulator training.

Several Navy sites are now grounding aircrews who exhibit symptoms after simulator flights. Here are a few suggestions that may help, from the Safety Center's Aeromedical Division:

1. Maintain simulators properly so that the motion and visual systems approximate actual aircraft motion as much as possible.

2. Take breaks if simulator training exceeds one hour.

3. Avoid "freezing" simulator motion in unusual attitudes.

4. Avoid simulators when ill, fatigued or on medication.

5. Do not fly for 12 hours after simulator training if you have or have had symptoms of this syndrome.

6. Report symptoms to your flight surgeon! This is the most important suggestion. Until we get more information on this syndrome, we won't be able to pinpoint the causes. Simulator-induced syndrome is *normal*, and you won't be "labelled" for having experienced it.

If you have any questions or comments about this, write Lcdr. Larry Frank, MSC, at the Naval Training Equipment Center (Code N71), Orlando, Fla. 32813 or call Autovon 791-5130.

Chugging Chariot. Lt. Z.P. May of VA-12 launched from USS *Dwight D. Eisenhower* (CVN 69) in an A-7E. At approximately 200 feet and 200 KIAS, he encountered severe compressor stalls. Quickly jettisoning his external stores, he reduced power in an attempt to clear the stalls. As the stalls cleared, he commenced a gentle climb, requesting an immediate recovery. However, at approximately 2,500 feet the stalls and engine overtemp reappeared, with 10- to 15-foot tongues of flame coming from his tailpipe. May reduced power and switched to manual fuel control; 10 seconds later, the stalls cleared.

He set the throttle at lower setting than before, permitting an on-speed approach. At the close-in, at-the-ramp position, the Corsair started to settle from the glide slope, and as May added power to correct, the stalls reappeared. However, a successful engagement was accomplished, followed by loud chugs and flames coming from the engine as

military power was applied on touchdown.

Navy Tower Saves Civilian. A lost civilian aircraft was overheard by Key West International Tower talking with a civil airliner and a military C-141. NAS Key West approach control was contacted for assistance. The Cessna 152 was 40 miles out, but the student pilot thought he was over Lake Okeechobee in lower central Florida. With Navy tower supervisor AC1 Payne coordinating, assisted by AC2 Suple, AC1 McGregor vectored the lost aircraft to NAS Key West rather than Key West International because of very limited night flying experience of the student and the availability of emergency/rescue equipment at the NAS. NAS Key West runway lights and strobe lights were put at maximum intensity. A search and rescue helo was launched. The student pilot landed safely *with less than one gallon of fuel remaining*.

Brain Locked? Where are your eyes when you report "three down and locked" or "gear down and locked?" Sometimes mentally blinded? Distraction, preoccupation or complacency may prove you an unintentional liar. Pattern work can become a real "grinding and grounding" experience when one forgets the basics, especially the complete "landing checklist." Although familiarity may breed contempt, consistent professionalism breeds consistent respect for uneventful takeoffs and landings. The consummate pro "verifies and knows" at all times the position of his aircraft's rollers. Those who check and double-check will indeed improve their unit's safety record as well as their own career opportunities. ◀



It's Not a Job, It's an Adventure

By Pacific Missile Test Center
Flight Test Division

THE crew was assigned to what was supposed to be a very ordinary ferry mission from NAS West Coast to a contractor's plant on the East Coast. Because of field closing hours at the plant, the crew opted to stay over at NAS East Coast with a refueling stop at NAS Midwest. The A-6E to be ferried had been the "work horse" for the organization with a reputation as a good flying machine with little history of problems. The crew had flown numerous missions together and were the pilot and bombardier navigator (B/N) NA-TOPS officers for their command.

Following an uneventful leg to NAS Midwest, the crew saw to the servicing of the aircraft, went to dinner and

finished their flight planning. Because of three National Weather Service weather warnings en route, they had filed to go south around the weather. Fuel requirements were computed and because the destination was forecast to be visual meteorological conditions (VMC), no alternate was required. En route procedures for weather avoidance were discussed, as was the field brief at destination. Night procedures were discussed at length, for while having met their minimums, neither airman had flown a night or instrument mission for several weeks. Armed with pubs and confidence, they manned their trusty Intruder, started engines and taxied to the runway — to sit for 45 minutes awaiting their turn to fit into a busy departure sequence. The crew computed their fuel margin and decided to leave before the next 1,000 pounds of fuel was expended or it was back to the line to "top off." Sure enough, clearance came for takeoff with 500 of the 1,000 pounds used.

Immediately after takeoff, the crew was vectored off their standard instrument departure (SID) and given a new routing — 200 nm farther north than a jet route direct to NAS East Coast. Quick computation of fuel required demanded a climb to a higher altitude to satisfy command requirements for sufficient "on deck" fuel at the destination. Center cleared the aircraft to the new altitude and the crew settled back for a two-hour night/IFR mission. While involved in deep discussion on "old times," they noticed that the slats indicator had barberpoled. A check of the wings indicated the slats were full up. Airspeed was reduced to "play it safe" and the event was dismissed as an indicator malfunction. About this time, Mother Nature decided to make this a sporting event.

As the B/N vectored the pilot around some isolated thunderstorm cells, turbulence started to increase as did the rain. The left generator dropped off the line and failed to reset. This killed the exterior lights. While making their next turn to avoid a storm, they noticed the vertical display indicator (VDI) was frozen. An attempt was made to call Center to advise them of the deviation, but the radio had now failed in both transmit and receive. The B/N suddenly stopped planning for a divert field!

The inertial navigation system (INS) had also failed, so the crew B/N switched magnetic compass/vertical gyro (MAG/VGI) and got into some heavy discussion of the remaining options available. Rules being what they are, the crew opted to continue to their destination and shoot the TACAN approach they filed for at their ETA. The appropriate identification squawks were given on time and time/distance computations showed their ETA was still valid. With an hour to go the weather at altitude improved to a solid undercast and the air was smooth. Relative comfort returned and the crews' spirits rose. The worst was over.

Leaving their last en route fix, they commenced the point-to-point to the initial approach fix. The undercast remained solid and the two airmen quickly briefed on a certain IFR recovery at their "VFR field." The B/N again briefed the pilot on what to expect for field layout, and the hard altitudes in their approach. They entered holding, commenced a descent in holding and flew the published approach in a driving rainstorm. The field was visually acquired at two miles. Proof that the air traffic control (ATC) system really works was given when the tower flashed a steady green light for landing. The touchdown was uneventful with the landing rollout increased by a newly discovered flaperon pop-up and anti-skid failure.

In the debrief, reconstruction of the night's evolution showed the crew followed command procedure, NATOPS and procedures learned in a recent instrument school. Totally unrelated electrical and mechanical failures were correctly analyzed and worked around. While confident in their aircraft procedures, the crew touched base with the local ATC officer to ensure that "Darth Center" wasn't considering legal action against these intrepid aviators. Again, the ATC system and instrument school were in agreement for the ATC officer had received word from Center expressing their kudos to the crew. A "big night" at the O'Club was bestowed on the crew (by each other) as their reward for a "normal" all-weather mission. Preparation for all eventualities had resulted in routine compliance to unforeseen problems. Perhaps that is also known as professionalism. ◀

A Comedy/Tragedy of Errors

By AFCM Steve Malina
Naval Safety Center

10

THE pilot lowered the gear and completed the landing checklist without incident. Both aircrew saw three down and locked indications with no light in the handle. But during touchdown, excessive left aileron input was required to counter the crosswind. The pilot felt the right wing dipping lower than normal, realized he had a problem and immediately added full power, just before the wing tip would have hit the deck. An aircraft holding short, transmitted that it appeared the starboard main landing gear had collapsed. The tower and two other aircraft confirmed the same. The aircrew attempted an emergency extension, tried negative and positive Gs and increased airspeed, all to no avail. The aircraft finally landed gear-up. No injuries or fire occurred.

Now for the goodies. The following is a list of what led to this mishap, which could have been prevented anywhere along the line:

- A post maintenance check flight (PMCF) profile was flown prior to departure with a landing gear discrepancy noted. Maintenance informed the aircrew not to expect the discrepancy to be worked off prior to departure. However, a discrepancy signoff was written anyway.
- During a previous landing en route, the landing gear handle was lowered with negligible movement of the gear. The gear was lowered using emergency extension. Maintenance was performed by an aircrewman and the inspection performed by the pilot. Troubleshooting and maintenance procedures were not in accordance with written procedures.
- The aircrewman was not qualified to perform any maintenance on aircraft other than daily and turnaround inspections.
- On next leg of flight, the main landing gear (MLG) discrepancy surfaced again. It repeated subsequently on all legs of flight until the final destination.
- A six-month history of aircraft revealed the following:
 - a. A total of 15 repeat discrepancies regarding the MLG were written and signed off.
 - b. The weight and balance form was outdated and did not

reflect the aircraft configuration on the day of the mishap or during entire transit.

c. Numerous airframe bulletin changes had not been incorporated in the aircraft.

d. The passenger oxygen auto deployment system was disconnected.

- The aircrew was not fully qualified in accordance with NATOPS and OPNAV requirements.

- Numerous discrepancies existed between the aircraft itinerary and the approved flight authorization letter.

- Data indicated that OPNAV 3710.7 fuel reserve requirements could not have been met.

- Logbooks and training jackets indicated minimal time had been allotted to training. Training was achieved on an opportunity basis with operational commitments overruling maintenance and training completely.

- A civilian passenger onboard at the time of mishap was manifested as the copilot.

- The crew failed to seek qualified maintenance expertise during 11 subsequent stops.

- The flights were conducted on a timetable which violated crew day/crew rest guidelines and carried the crew across eight time zones without adequate rest and accommodations.

- Repeat discrepancies and an engineering investigation indicate maintenance personnel expertise was lacking.

- Quality assurance should have monitored this trend along with the airframes and electrical branches.

All in all, we had some very lucky personnel this go-around. Was this your squadron? Could it be your squadron? Are you going to let it happen to your squadron? Let's take a close look at what type of maintenance and training we are doing. If we are not doing the best we can, then let's start now. Pass this on to **ALL HANDS. EVERYONE** had a lot to do with this mishap. The whole chain of command fell down on this one. **ARE WE GOING TO ALLOW IT TO HAPPEN AGAIN?**

How much gas do you really have?

By Lt. Steve Frink
HC-11 Det 4

HOW often do you check the fuel gauges? Every 15 or 20 minutes? More often? Do you use your clock to cross-check the fuel gauge and monitor the time since the last refueling? Is that fuel split the result of one engine having a higher fuel flow rate than the other? At least the backup low-fuel warning system is reliable, right? T'aint necessarily so. Case in point:

After refueling aboard an AOR, an H-46 launched to continue a battle group vertical replenishment. Initially, the fuel quantity and caution panel checks were good. The copilot cross-fed from the No. 1 tank for five minutes to even out a slight fuel split. Less than 30 minutes into the flight, the No. 1 low-fuel warning light flickered a few times and went out. Subsequent caution panel checks were good and during the flight, fuel consumption seemed normal. At 1+45 into the flight, the HAC reported that he would get fuel in about 10 minutes (fuel consumption indicated less than 600 pounds per hour per engine). The fuel gauges indicated about 450 pounds per side, and no low-fuel warning lights were illuminated.

During transition to forward flight after a VERTREP drop, the No. 1 fuel boost pump caution light illuminated. The HAC took control of the aircraft just as the No. 1 engine flamed out. Arming the emergency throttle and gaining airspeed, he arrested the aircraft's descent less than 25 feet above the water. As rotor RPM decayed below 92 percent, the generators dropped off the line, causing loss of electrical systems and the stability augmentation system (SAS). The copilot jettisoned fuel (battery powered), started the auxiliary power plant (APP) and the aircrew prepared to ditch. The

APP was brought on line, restoring the electrical systems and SAS. While the copilot was securing fuel jettison, the APP flamed out (the #1 fuel cell dry and the fuel in the lines expended). Again the helo was without electrical systems and SAS. Shortly, the HAC recovered sufficient rotor RPM to regain the main generators, thus restoring electrical power and SAS. With the helicopter gaining airspeed, the HAC started a slow climb and made a running landing on a nearby CV. Upon shutdown, the No. 1 fuel quantity indicator read 450 pounds and the No. 2 fuel quantity indicator read 200 pounds. A visual inspection revealed that the No. 1 fuel tank was completely empty.

Most incidents reveal the "chain" theory of development. A series of events occurs, each event having a minor significance, culminating in an incident. Remove any link in this chain and all you have is a series of minor events and no major incident. The biggest link in the chain leading to this incident was the simultaneous failure of the two independent fuel quantity indicating systems. Also significant was the possibility that the No. 1 engine had a high fuel consumption rate (subsequent check flights confirmed that the No. 1 engine did in fact burn fuel faster than No. 2). During the post-incident maintenance inspection, a malfunction of the No. 1 fuel gauge was discovered causing it to read 250 pounds higher than No. 2. The low-fuel warning system had also malfunctioned, depriving the pilot of the only other cockpit indication of fuel quantity.

The moral of the story is that, given the unreliability of some aircraft fuel systems, you should always be asking yourself, "How much gas do I really have?"

11





A Heavy Hazard

12

To refuel an OV-10A/D, four to six people are needed to lift the nose and chock the nose tire to keep it elevated — a dangerous effort for the lifters. This is because the filler-cap is on the front end of the 300-gallon external fuel tank which is tilted down when the aircraft is in normal position. A hydraulic jack will not fit under the plane with the tank installed.

A solution to this hazard would be to design a jack that *would* fit under the aircraft with tank installed or install a filler-cap toward the rear of the external fuel tank.

Achingbackmouse

New drop tanks have been designed which will alleviate this problem. The filler cap will be further aft, allowing complete refueling without elevating the nose of the aircraft.

The old tanks will be in the system for about five more years, however, so the problem is still with us. A five-ton axial jack should be used to raise the nose for refueling these tanks. Manual lifting of the nose for refueling is not prescribed by instruction and is a dangerous procedure that should be discontinued. — Ed.

The Hanging Helo

In at least one squadron, loops of rope have been suspended from the rails over the seats in their H-46s. The seat belts are routed through these loops when not in use, elevating them off the seat. The rationale is that they are more accessible that way.

As a former crew chief and search and rescue swimmer in H-46s, I believe that this is a serious hazard in over-water operations. In the event of a water ditching, "helo dunker" situation, these loops will become 25 nooses waiting to trap the passengers trying to egress. I have spoken to the squadron's safety officer about this, but the practice continues.

You'ldrownlikearatmouse

Can't Do Safety

An aircraft was released for a PMCF (post maintenance check flight) repair and replacement of the port aileron. The plan of attack was to fly PMCF and then a normal mission. The mission was flown with no PMCF requirements completed, reason being that the pilot was not signed off for PMCF responsibilities. Later the same day, the air-

craft flew a PMCF with a qualified pilot. Item 61 of NA 01-40AVD-1F was unsatisfactory. This is the flight control disconnect which is directly related to the ailerons.

We not only violated 4790.2B page 2-6-30 para 2616 and good safety practices, but we could have lost aircrew and aircraft. In this incident we were driven by operational commitments and the "can do" spirit. The squadron's complete chain of command was aware of this whole evaluation. I personally wonder how many aircrew are in Davy Jones's locker because of the "can do" spirit.

Cautiousmouse



But Is It OK?

Why is it when someone brings up the safety aspect of this or that, someone with brass on his collar makes the "it's OK" decision? Why play with established safety regulations?

A sister unit sharing the same hangar with our unit was painting an aircraft with polyurethane paint! Unprotected maintenance personnel were hard at

ANYMOUSE

work on birds next to it. Putting my E-7 foot down hard, I halted the painting — temporarily. The brass stepped in (two O-4s in this case) and embarrassingly put me in my own pay grade by making an "it's OK" decision.

Does it take someone being hospitalized to open their eyes?

Overruledmouse



FOD Is "Tiring"

A known, yet rampant, FOD (foreign object damage) problem is FOD being carried onto flight lines in tire treads of ground support vehicles. I cannot believe the reluctance of some commands to implement instructions designed to counteract this problem.

A number of solutions exist. For example, avid readers of NAVSAFE-CEN publications know about the "shaker" at NAS Miramar, but for many commands that system is simply too expensive. Another proposal is to require wide jeep-type tread tires on all vehicles permitted on the aircraft ramp and turn-up areas. At our base this was dismissed as "prohibitively expensive."

Another is to simply establish boundaries past which no vehicles are permitted without tire inspection and

removal of any FOD in the tires. Most of us here agree this proposal is workable but nothing has been done to implement it. Even if we did it here, the problem would still exist at other bases. In my opinion, we need some firm direction from the top on how to remedy this problem.

Tired of FOD mouse

Triple Header

While recovering an aircraft in the pits, the directing plane captain gave the proper signals for stop, dearm seat and canopy and shut down the engine. The pilot nodded as if to acknowledge that he had pinned the canopy and dearmed the seat. Another flightline person climbed into the cockpit and didn't even check to see that all safety devices were "safetied." The aircraft was fueled, towed back to line and chained down. Another flightline person noticed the seat was still armed. While he was going to get a seat shop



person, another plane captain dearmed the seat on his own.

Summary: Within a 20-minute period, three safety violations had occurred. The pilot should have double-

checked all safety devices before leaving the cockpit. The brake rider should have ensured the safety devices were "safetied" before entering the cockpit. The plane captain who dearmed the seat should have cleared the area of all personnel and waited for a qualified seat-mech to dearm the seat.

Safetied mouse

Upside Down Hazard

Many non-aircrew personnel who fly occasionally put on the LPP-1 life preserver upside down. I know this because I have shown people on many occasions the correct way to wear the LPP-1 when I noticed they were wearing it upside down.

It would be very simple to stencil in bright orange "top" on the upper part so it would be put on right. Also, you could put "bottom" on the bottom so that someone wearing it wrong would see this word and realize it should be reversed.

In the event of a ditching, an improperly worn LPP-1 would be of little, if any, help. Frustration and panic could result. The wearer must be shown clearly the correct way to wear the LPP-1.

Rightsideup Mouse

Flight crews are responsible for checking their passengers to make certain they are wearing the LPP-1 correctly. Also, since the flap opens from bottom to top, this helps to indicate topside. However, there is always room for improvement when it comes to safety. The Naval Safety Center will submit an action chit to ILSAMP (Integrated Logistic Support Acquisition Management Panel) recommending the stenciling of LPP-1 containers to indicate the orientation of the pouch. — Ed.

Will Your "ROLLERS" be Down?

Anonymous

The days of "kick the tires, light the fires and we'll brief on guard" are memories of the past. "Barn storming" has evolved into a complex, demanding and professional endeavor. The day of the white scarf, shoestring budget and a dream has given birth to what layman refer to as aviation. Daring has been replaced by education; chance has been supplemented by training; and the FAA moves closer to controlling what used to be a big blue sky. In the interest of what? *Safety!*

Standardization has become not only a desirable entity but one of our daily routines. After all, are we not creatures of habit? Every facet of our aviation career is controlled by some directive. It might be NATOPS general flight and operating instructions (OPNAVINST 3710.7-), the NATOPS manual for our type aircraft, FAR 91 (general flight planning) or OPNAV 4790.2 to name only a few.

Ultimately, our flights are covered by checklists. It could be said that our operations today are the result of lessons learned over the years. Some of those lessons came at a high price. Many lives and pieces of equipment are the price of the system we have today.

And while it can be said "you can lead a horse to water but you cannot make him drink," most of us are true believers in the checklist.

If this is true, then I would pose the following question: What is the one checklist item that is ultimately required to land an aircraft as an engineer designed it? Landing gear you say! If you agree, then have you ever wondered why the "gear" isn't the first item on the landing checklist placard in all our aircraft? How many people and aircraft would have made it if the "rollers" had been down when the pilot got distracted? Despite all our infinite wisdom, how many more have to pay the price in the name of progress before we recognize the obvious? It is probably easier to change a checklist than continually retrain the creature of habit called man.

14



A-6E

HARNES
ARMAMENT
FLAPERON
HOOK
*WHEELS
FLAPS
FUEL
AUTO PILOT



OV-10

HARNES
*WHEELS
FLAPS
COND LEVER
BRAKES



TA-4

ARMAMENT
SPOILER
HARNES
HOOK
*WHEELS
FLAPS
BRAKES



EA-6B

HARNES
FLAPERON
HOOK
*WHEELS
FLAPS
FUEL
AUTO PILOT



F-14

ARMAMENT
FUEL
HOOK
ANTI-SKID
WINGS
*WHEELS
FLAPS
AUTO PILOT
AUTO THRUST
GLC
HARNES



"Please Look Out the Window"

By Lcdr. G.R. Murchison
VA-27

IT was a beautiful day over the entire Gulf of Mexico. It was a beautiful aviator's schedule, too — one leg with an old pro, one solo, change planes and finish the evening with a student cross-country to a CQ det.

My copilot and I manned our trusty "Scooter" after an instrument standardization conference and zipped into NAS Southeast where I dropped him off to work with the squadrons up at NAS Farther North. While I was waiting for fuel, I went over to weather to get an update for NAS Lone Star and a "best guess" for my return later that night. As I was walking from the line to the weather office, I got the uneasy feeling that before the night was over there'd be some fog. But the forecast was for 25,000 scattered with 7+visibility all night. Still, it felt enough like "it's gonna get foggy" that I asked for the surface prog, sea water temp, projected temp/dew point spread, etc., just in case my evaluation of the data might support my gut feeling that the weather was going to be a whole lot worse than the forecast indicated. Not a chance . . . all the data supported the 25,000 and seven that the forecaster had forecast, so I said to myself that my "feeling" had to be wrong and that the experts had indeed done their job and given me an accurate evaluation of the evening's weather. Still, I knew deep down that if I were going fishing in the bay that night, I'd stay close to shore.

On to Lone Star with a spectacular sunset en route. A quick call to base ops confirmed that my student and his aircraft, all filled and ready to go, were standing by. After securing the Scooter we went right into the brief for the return flight to Southeast. Another check with the weatherman in Lone Star showed no change for the forecast, and soon we were on our way.

It was a beautiful, clear night. Even the forecast 25,000 scattered layer had failed to materialize. Halfway, a check of the destination weather still showed 25,000 and seven. As we began our descent, I began scanning the area ahead, and I was suddenly glad that I'd reviewed the approaches for my divers — instead of city lights there was only a dull glow through some low clouds.

— "Center, what's NAS Southeast showing for weather?"

"25,000 and seven."

"Thank you."

Switching to approach, I tried again.

"Approach, what's your current weather?"

"25,000 and seven."

"Roger, looks to me like some low stuff moving in down there . . . could you check it, please?"

"Stand by."

About a minute later (we were still descending, watching our fuel and deciding we could afford one approach at Southeast before diverting — the primary divert was clear when we'd passed it a few minutes before).

"Weather says it's 25,000 and seven."

"Ask weather to look out their window, please."

"Roger, stand by." (Another minute)

"Charlie 676, Approach. Current Southeast weather reporting measured ceiling 300 overcast, visibility one mile in fog."

"Roger, I'd like a precision, and please be ready with a clearance for my primary divert."

As we dirtied up on downwind, still above the clouds, approach reported the weather as 200 over and ½-mile visibility. I told my student that I would fly the approach from the back seat while he rode the controls and stayed heads up looking for the runway.

"On course, on glide path" into the goo at 600 feet. Thick stuff — not even a glow ahead — 400, 300, 200 feet, I went for the throttles when "I've got it, I've got the runway" sang out over the ICS. "Roger, you've got it" followed by a very nice landing, thank you.

As we turned off the runway I asked ground, "What's weather reporting now?" "One hundred and a quarter" he said. After shutdown, a call to weather revealed that the field had been closed for weather. "Yes sir, there's a funny thing about that. The guy I relieved was laughing about some pilot who was in here this afternoon who just had a feeling that it was gonna get foggy tonight."

The moral of the story: Even if the rules don't require it, always have an alternate . . . keep your options open. ◀

By Lt. Jerry M. Linenger, MC
VRC-50

OUR squadron's dining out was progressing rather well. To be sure, we had already endured the cocktail hour and its introductions ("What was her name again?"). We'd paraded into the grand ballroom, and had, for the most part, found our seats. The mess member and guests had gulped down massive amounts of smoked Lapu-Lapu, Blanc de Blanc, French onion soup, Caesar salad, Lemon sherbet "palate refresher," Vin de France, roast tenderloin of beef Wellington, Jardiniere of vegetables, Fondantes potatoes and Mango Mella. Our box lunch training had undoubtedly paid dividends, and not a single Alka Seltzer bubble could be seen rising from the Harvey's Hunting Port before each of us. Everyone looked, and felt, fat and happy.

The evening to this point was not, however, without glitches. Rule No. 15, specifically prohibiting the "launching of projectiles," had been violated on numerous occasions. Sure, trips to the grog bowl were taken for other infractions such as inverted cummerbunds, haggling over date of rank, foul language, wearing eccentric earrings and dining on floral arrangements; but in aggregate, these were minor when compared to projectile launching. Crescent rolls, slices of wholewheat bread, biscuits and, in desperation, even Fondantes potatoes, made up the aerial display. The general flow of air traffic appeared to be in the direction of the head table, with numerous rolls inscribed with the "X-RAY OSCAR" call sign. To observe this aerial display was almost as much fun as watching the Blue Angels perform.

Naval Aviators, you see, are fanatics for airshows and flying. Futile attempts to "control traffic" by Mr. President with fines and grog bowl trips did not dampen the activity. No, a Naval Aviator becomes so totally immersed in his joy that he won't allow himself to become distracted while executing a full-stop landing, two tables distant, into the XO's wine glass with a spinning croissant. Getting the job done, concentration on the task at hand and the pure joy of adventure are ingrained in the aviator, with possible consequences and punishments compartmentalized away during critical "flying maneuvers."

Finally, the head waiter's quick assessment of the situation and call of "clear tables" accomplished what the president, immersed in the heat of the battle, could not. Ammunition soon dwindled, and the second Marianas Turkey Shoot came to a close. An outside observer, looking at a situation from a different angle, can sometimes shed a new light on a difficult problem.

Harvey's Hunting Port replaced Vin de France as toasts began. The traditional toasts were completed, then modified as appropriate. "Our Missing Comrades" transformed into "Our Newly Fallen, Grog-Bowled-Out Squadronmates." Our "Comrades in the Other Services" toast specifically excluded the Air Force the second time around. (Naval Aviator pride — being the best in the world...) An informal

A Toast to W



toast to the Naval Academy predictably generated mixed reviews — calls of "squids" by some, and clanging rings to raised glasses by others.

But the most impressive toast of all was to the "Wings of Gold." The toast was presented with sincere pride and toasted by all with true, genuine conviction. An emotional intensity filled the room, chests swelled, and even the most frequent grog bowl attendees stood trim and tall. Naval Aviators, you understand, are proud of their accomplishments, of their struggles, of those who stood before them.

To me, this simple toast was the highlight of the evening. Squadronmates and friends looked around at each other for

The subsequent toast generated a grog bowl trip for myself — as the “*Wings of Gold*” toast became more specific — “to pilot wings.” I drank the toast, without taking exception. An NFO and an aircrew wing-wearing warrant officer, however, took exception to the toast and were predictably escorted to the grog bowl (the president of the mess being a pilot himself) with me following for not properly defending my flight surgeon wings.

Keep looking after each other, communicate problems and be safe. A toast, with pride, to wing wearers everywhere. SAFETY NOTE: No one was allowed to drive home following the dining out — all of us stayed in the hotel where the dinner was held. A good, *safe* idea. ▶



So.... How Do You Like It So Far?

By Ltjg. K.C. Hutchinson
VA-27

LIKE all other newly winged aviators, I wore those beauties with pride and was really excited to start my RAG training and get my first flight in the A-7E Corsair II. I didn't realize how exciting that first flight was going to be.

I started right away. Finishing the instrument RAG in the TA-4 while concurrently doing FAM ground school and my first few A-7 simulators had me feeling like I was at the top of Niagara Falls swimming like crazy. It's funny how everybody thinks that it gets easier once you have your wings. Ha! Anyway, things were finally looking up; instrument RAG — finished, FAM ground school — finished, simulators — finished, NATOPS test — finished. Finally, I was scheduled for my first A-7 flight. Everything was going as expected, a restless night, an early brief. I was sweating all the easy stuff that goes away after the first flight, things like plane captain signals and taxiing out of the chocks without looking too silly, etc.

After an extensive brief with my instructor, we put on our gear and headed out to one of the most awesome aeromachines in the Navy's inventory, the dreaded TA-7C. Everything proceeded as briefed, preflight, man-up, taxi and takeoff. We got over the mountains into the restricted

area and started doing our thing. After a few easy turns it was time to move on to the stall series. Doing stalls had never bothered me in the past and I had done several of them in the simulator so I was all set. Power back, nose up, hold it . . . buffet, recover, MRT and optimum angle of attack. Looking good. The rate of descent was almost back up to zero, when . . . BANG!

It wasn't just a loud bang, it was a sickeningly loud metallic bang. The kind that puts your heart up under your tongue and makes your eyes about the size of basketballs. My instructor immediately pulled the power back and unloaded to max endurance. "What was that?" echoed over the ICS. "I've got the aircraft." We started our glide toward China Lake while trying to figure out what had happened to our plane. The RPM was reading 80 percent and as my instructor eased the throttle forward the RPM stayed there. It didn't even flicker. That's about the time we figured out that things were not going quite the way we had expected.

Switching to manual fuel control immediately produced compressor stalls that went away when we switched back to normal. We jettisoned a drop tank and refueling store hoping to slow down our rate of descent. We were still descending at about 1,000 FPM, even though the RPM reading would normally have given us level flight. We found out later that one of the burner cans had started breaking apart and FODded the turbines, resulting in minimal thrust.

After making a few distress calls, I started to prepare for ejection; kneeboard off, lap belts tight, harness locked. I spent the majority of my efforts arranging the harness straps going between my legs so I wouldn't get too surprised during opening shock (Heh, I'm not stupid).

The desert was really starting to fill up the windscreen when we finally decided it was time to leave the aircraft. Ejection was initiated from the rear seat while I sat up front with my hands on the lower ejection handle, ready to pull if the sequence didn't start immediately. The canopy fracturing system (explosive cord) on the canopy went off, making big pieces and then air out of the bubble over my head. Soon after that I felt compressed in my seat and grayed out. I felt like I was tumbling backward when my 'chute deployed and opening shock woke me up. I don't think I was in the 'chute for a second before I had my mask off and immediately looked up at my canopy.

What a great feeling it was to see a good canopy overhead. My left arm seemed entangled in some straps and I struggled to free it, fearing I would land on it. I was getting close to the ground when my arm was finally free and, detecting a back and left drift, I tried to relax and get into a good landing position. WHAM . . . I hit hard and it knocked me unconscious. The next thing I remember, I was waking up to find my instructor slowly walking toward me. I fumbled with my gear for a little while, trying to get out of it.

My instructor had landed about 30 yards away and walked over to see if I was OK. We were both in shock and after I got out of my gear, we left it and walked back to his gear.

This was not exactly the most logical thing to do, but when we got there, we decided that it was time to lie down and relax for a while.

We quickly became the center of attention in the valley. A pickup truck came barreling toward us with a man and his wife who lived nearby. They ran toward us with a first-aid kit and tended to a deep gouge on my instructor's hand. We were still feeling pretty lousy when a civilian helicopter that was working nearby landed near us and the pilot ran over asking if he could take us somewhere. We declined his offer, choosing to wait for the SAR helo. I was really starting to feel good now and noticed the circling on-scene-commander. I pulled out my instructor's PRC-90 radio and told him that we were in good shape. In about 10 minutes the SAR helo arrived and flew right by us. The overhead aircraft directed him back around and a few pencil flares and a day smoke later, he picked us up.

We were both very fortunate. The seats worked as advertised and I walked away without a scratch, while my instructor only had a few stitches in his fingers and a sore neck.

There are a few lessons to be learned from my experience that I would like to pass on. First, for all you "new guys," whether in the training command or RAG or whatever, don't count on those first few flights to get comfortable.

Learn your emergency procedures well before you go on that first one. There's no telling what you'll be called upon to do.

Second, get rid of your mask. If you're going to land in some trees, you may want to just loosen it for protection. Don't leave it on tight expecting to take it off after landing. I am an experienced parachutist and had no fear of landing, but I hit so hard it knocked me out for a few minutes. I could have suffocated had my mask been on. Also for those of you who are not single-seaters, it's important to find your crew as soon as possible to evaluate their injuries. One minute could be the difference between life and death for an injured crewmember if he's bleeding or suffocating in his own oxygen mask.

Finally, don't assume that your rescuer can see you. We were out in the middle of the desert with two parachutes on the ground, a white pickup truck, a white and orange civilian helicopter and a group of six people. Our SAR helo flew right by us . . . unbelievable!! Those signaling devices are in your vest for a good reason, so use them. It would be really unfortunate to prolong your rescue because your signaling devices were not properly used. Have them ready and easily available so you don't miss the opportunity to signal your rescuers; you may not get a second chance. ◀

Playing by the Rules

By Ltjg. Tom Taylor
VA-146

SCHEDULED ACM for an A-7 section versus a Tomcat section: Aside from low levels and ordnance delivery, it's probably the most invigorating flying we A-7 pilots do. Plenty of yanking and banking is involved and today should have been no exception.

The brief went smoothly, including the usual rules of engagement (ROE). Corsair pilots don't brief ROE as often as the fighters, but nonetheless, I've briefed ROE dozens of times throughout my first six months as a fleet pilot. Recentness of flying, hard/soft deck, weather, communications, collision avoidance, knock-it-offs and departure/spin were all covered and were all intimately familiar.

The launch went smoothly with all the players getting airborne and topping off prior to starting the real fun. The first engagement was a warmup consisting of F-14s intercepting our wiley section of A-7s and both sections performing the initial engaged turn. Outbound to our station I really started getting pumped up for the next engagement. By the time we were nearing the intercept, I had completely transformed into a wild animal, ravenous for some "turkey." My eyes seemed to be all over the sky trying to get the first tally, and it wasn't long before I did just that.

I called the bogey's position to my lead and then called the turn for our section. I ended up in a slight dive with one of the Tomcats boresighted, a head-on pass in the making. Hungry for the guy, and not getting a tone from the primary weapon, I maneuvered to put the gun-aiming diamond smack dab in the middle of this rapidly closing "enemy." I simulated firing and at the same time realized there was a whole lot of F-14 in my wind screen and rapidly getting bigger. This was no ordinary port-to-port pass with plenty of separation. Fortunately, mutual evasive maneuvers saved disaster.

In a very short span of time, this eager killer violated two parts of ROE collision avoidance. I performed a head-on guns pass and busted the 500-foot bubble. In a few seconds, I let my eagerness take control and endangered three lives and two airplanes. The wargame was not so important that it warranted forgetting the rules.

There were plenty of "goods" in the debrief, but the one glaring one will not be forgotten. We can't let enthusiasm get in the way of professionalism and safety. There is a reason for every rule and from now on I'm playing by *all* the rules. ◀

Standard Approach Brief and Backup, Please

By Lt. B.A. Cosgrove
VP-11

THINK back for a moment to the training command. Before an instrument syllabus flight you'd brief all instrument approaches in detail because your grade depended on it. Now you're a seasoned fleet pilot in the reliable, all-weather P-3C Orion and you're confident of your ability to execute an approach and landing under almost any weather conditions. So, how well do you brief an approach now that you're not being graded every time? Consider the following scenario and determine for yourself the importance of this short brief.

You've been assigned as the plane commander of a flight from NAS Brunswick, Maine, to NAS Norfolk, Va., with a short stop in Otis ANGB on the return leg to Maine. The weather forecast indicates fair conditions with scattered showers predicted along the entire route of flight, so you don't really mind the fact that you've drawn an 0430 preflight and two wing-weenies as your copilots. The flight to Norfolk is uneventful and now you're on the return leg, so it's time to discuss the approach your wing compatriot in the left seat intends to shoot into Otis. Checking the weather forecast you anticipate an approach to Runway 32. You break out your approach plates for the ILS Rwy 32 approach and listen intently as the pilot in the left seat conducts a thorough brief. Meanwhile, center has issued you a descent, assigned a heading and passed you off to approach control. Your descent and approach checklists are complete so you're ready for this approach under IFR conditions when approach control informs you to expect the ILS Rwy 23 approach. One of those forecast rainshowers is passing over Otis so the winds have changed from the forecast. Well, you and the pilot quickly switch your approach plates to the new approach and since he's busy preparing the aircraft for the approach and landing, you retune the outer marker, recompute the timing and quickly

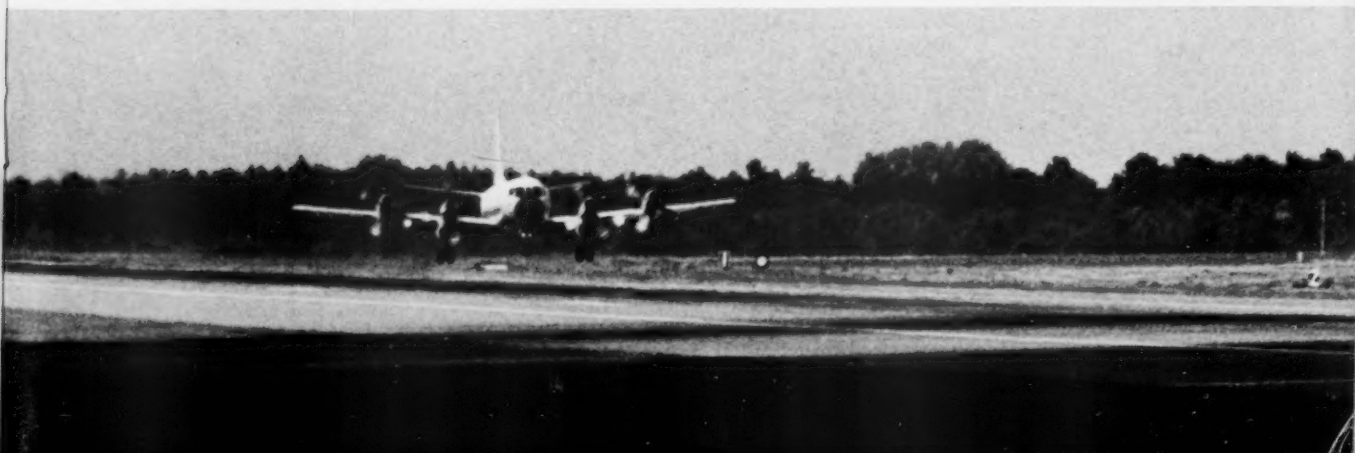
brief the descent profile and minimums for the approach. By now approach has turned you onto the base leg, so you drop the landing gear and complete the landing checklist as instructed by the pilot. Somewhat uncomfortable, you review the situation one last time and inform the pilot that the approach and landing checklists are reviewed and that you'll give him a "standard instrument backup." Approach assigns you a heading to intercept the final approach course, clears you for the approach and switches you to tower frequency. The pilot lines up on heading while you switch radio frequencies and check in with Otis tower.

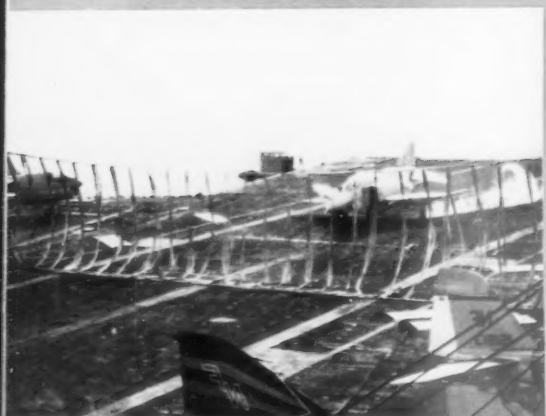
Upon resuming your instrument scan, you notice that there is no course or glideslope information being displayed and that the pilot has wisely remained at the last altitude assigned by approach control. You're both trying to solve this dilemma when the tower instructs you to maintain 1,600 feet and contact approach control for radar vectors and a second chance at this bewildering approach.

So what happened? No, there's nothing wrong with the ILS equipment at Otis. In your haste to set up for a new approach you forgot to retune the localizer frequency on both VOR selectors. Your unfortunate mistake was noticed by an attentive controller and a reliable third pilot in the cockpit who, on the missed approach, noticed the discrepancy between localizer frequencies. The second approach is uneventful and results in a fine landing at Otis.

You won't get a "down" on this flight, you're no longer a student in the training command. But you had better re-evaluate your professional abilities and your responsibilities as a plane commander for the safety of your aircraft and crew. You're a seasoned fleet pilot; how well do you brief an approach now? Remember, it's the lives of *your crew* and the condition of your aircraft that depends on your professional abilities and expertise in the cockpit, not a grade. ◀

21





Maj. John Yencha
Capt. Mike Healey
VMFP-3

Maj. John Yencha (RSO) and Capt. Mike Healey (pilot in command) of VMFP-3, Det. Alpha, were on a routine reconnaissance mission during midday cyclic operations in the Indian Ocean when their RF-4B Phantom II experienced a utility hydraulic failure. Healey immediately turned the aircraft back toward the USS *Midway* while Yencha contacted strike and notified the ship of their situation. While holding overhead, waiting for the next recovery, the aircrew discussed their plan of action with the squadron representative in air operations. Aircraft configuration, approach speed and required wind across the deck were determined. The recovery was in progress when Healey initiated the emergency landing gear extension system which pneumatically extends the landing gear. Cockpit indicators showed the two main gear were down and locked but that the nose gear was still up. This was confirmed by the recovery tanker. All efforts to extend the nose gear by putting negative "G" on the aircraft were fruitless. A short discussion aboard the *Midway* ensued and it was decided that a barricade landing would be attempted as per NATOPS. Air operations notified the aircrew of the decision and went over the plan with them. Meanwhile, below, on the deck of the *Midway*, all three of the arresting cables were pulled and the barricade was rigged. Flying at 5,000 feet downwind, Healey blew the flaps down and turned inbound for a five-mile straight-in approach. Paddles took control from one mile out. As the RF-4B crossed the round-down, the LSO gave the command "CUT!" and the result was a picture-perfect barricade engagement.

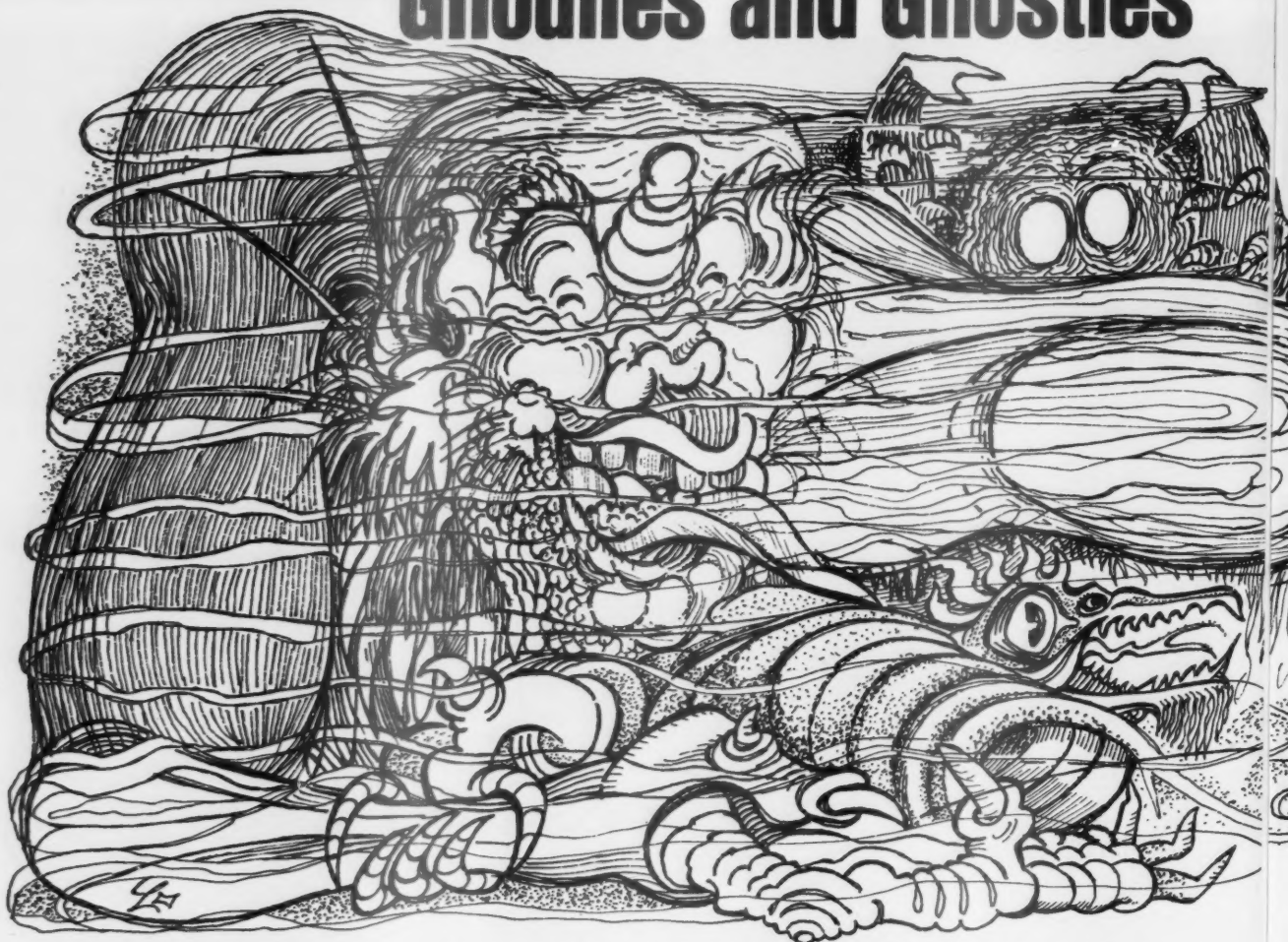


BRAVO ZULU



"Ghoulies and Ghosties"

24



WHEN the sun goes down, all aviators become aware of the "night gallery" effect. The aircraft begins using more gas than normal; the oxygen seems lower at the end of the hop than usual; the aircraft makes funny little noises and never handles quite the same as it did 30 minutes before sunset. Probably the worst feeling is looking out and seeing *nothing* — the total absence of light — a black hole. Is it possible that too many of us compensate for that "black hole" by treating it like a simulator? By just not looking out there too often? (... "To keep from inducing undue vertigo, minimize head movements as much as possible ...") Why look anyway?

There might be something out there.

Some thing which might ruin your night. It might be your wingman

For those aviators with "enough" night experience, there exists a common occurrence — a sense of "heightened awareness" ... "a little voice in the back of your head." For the rest of us, there is a feeling likened to knowing that there

is something under your bed at night with green claws.

That thing has moved.

It waits at the "45" in the night pattern. It knows you won't be looking over your shoulder or out the extended final because you're too busy getting set up for the pass.

It has tried to get me three times.

The first was in the RAG where the "little voice" was the IP in the back seat who saw it in time. We both learned that night to never let down our guard. The second time was after my first cruise, back in the night VFR FCLP pattern. I now had my own "little voice" (and no back seat) and it was saying ... "Watch out bud, you've been here before" I kept scanning and there it was, trying to sneak up and join the pattern on an extended final without telling anyone. An easy maneuver, to pass behind and go around high, cheated it out of its fun.

The third time it almost won. Three weeks after the second time and again in the night VFR FCLP pattern, my

And Things That Could Bump In The Night . . .

By Lt. Daniel S. Dealy
VA-27

little voice was talking. Scanning around, the pattern looked normal . . . it was playing Wily Thing . . . Rolling out on final with a glance over my right shoulder as a last check, my little voice was *not* happy. Something was bugging the edge of my vision.

It was there.

Heavy nose down and a fast crossunder technique kept everything intact. It was not pretty. In fact, it looked like an A-7.

Is all this a lesson in favor of two-seat aircraft?

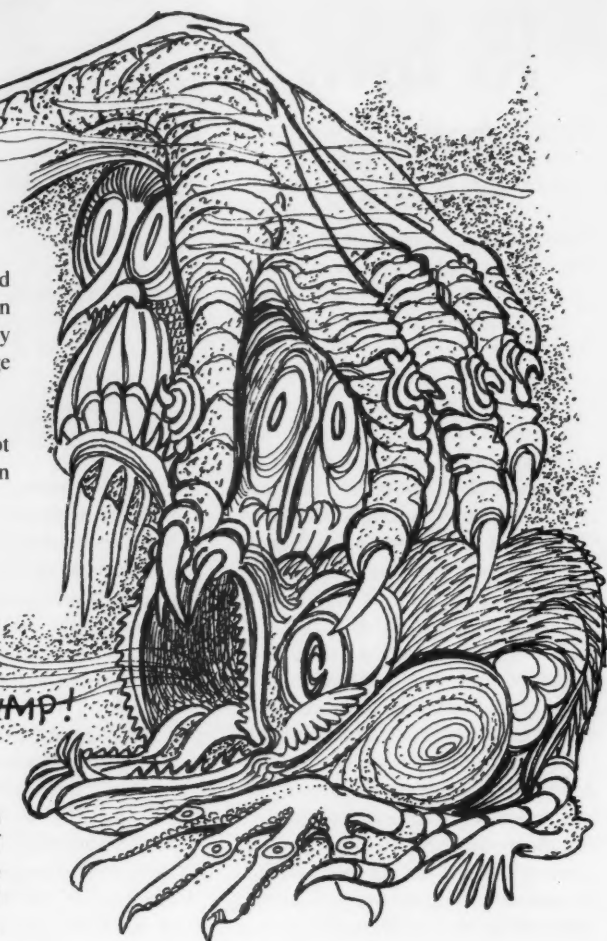
No.



For a single-seat pilot, supreme satisfaction comes when closing the canopy, looking behind and seeing the back of the cockpit. *There is no one else in there.* It is my aircraft to fly, my decisions which form a reputation as an aviator, and when it comes down to it, it is my rear end to save or lose.

Nowhere does this concept reach as dramatic importance as in night operations under high task loads such as bombing and *especially* in the landing patterns. The night VFR FCLP pattern is a source for many a harrowing tale.

I'm sure that most of us have had, or will have, our share of close calls. All aviators, especially those of us who pride ourselves on flying solo, are aware of the "night gallery" effect. We might have fewer close call at night by re-emphasizing that SCAN means more than just an occasional glance out into the gloom. Especially around any VFR landing pattern. LSOs are a great asset, but they can get too busy to effectively monitor a crowded FCLP pattern. Ultimately, it's our lives up there in the twilight zone. Listen to those "little voices," be they human or experience, keep all heads on a swivel all the time and . . .



"FROM GHOULIES AND GHOSTIES, LONG
LEGGITY BEASTIES
AND THINGS THAT GO BUMP IN THE NIGHT,
GOOD LORD DELIVER US."

A part of the Episcopal Littany
Circa 17th century

25

"Oscar" Is SAR Star

By Bud Baer
Approach Staff



26

Kaneohe Bay, Hawaii — The letter of commendation reads as follows: "With complete disregard for your own personal safety *and kapok stuffing*, you allowed yourself *to be thrown* at excessive altitude from the HH-46A SAR (search and rescue) helicopter into the coastal waters of Oahu (Hawaii) for the purpose of search and recovery training.

"Upon entering the water, you assumed the proper float position and retained the *same ridiculous facial expression* you had aboard the aircraft. Despite having been refused immediate pickup service by your own shipmates from Waterfront Operations that same evening, due to your superb evasion techniques, you managed to reach shore, using a float and body surf combination rarely exhibited.

"Once again, with complete disregard for your own personal safety, it is suspected that during the night or the following day, you somehow lost all your clothes and flotation device. A SAR helo crew spotted you the next day lying on the beach with no clothes, with probably no idea how you got there and with that same big smile on your face. Despite the

charges of indecent exposure and conduct unbecoming a sailor, your actions were in keeping with what would be expected from others of your composition. Welcome home!"

Thus ends the letter of commendation to *Oscar* from the CO of Station Operations and Maintenance Squadron (SOMS), Marine Corps Air Station (MCAS), Kaneohe Bay, Hawaii.

Oscar, you may have guessed, is a dummy. Clothed in Navy dungarees and orange life vest, he sees a tremendous amount of action with the SOMS SAR group, says Capt. Steve A. Wellman, USMC, one of seven SAR pilots who fly four HH-46A Sea Knights on SAR missions.

"We just toss him out of the helo and let him drift," Wellman explained. "A SAR crew will go out and 'rescue' him. *Oscar* has helped us a lot in maintaining our proficiency so he deserves the letter of commendation. And he *really* did lose his clothes and life vest on one mission."

Thus, *Oscar* is a major participant in helping SOMS SAR to perform its primary mission — be always ready to come to the aid of aircraft attached to Marine Aircraft Group 24. He similarly enhances the unit's addi-

tional major mission of helping the U.S. Coast Guard in coastal emergencies. These occur rather frequently with the extensive coasts and beaches that encompass the Hawaiian islands. *Oscar* has sharpened the capability of SOMS SAR in its search for potential drowning victims since he has played the role hundreds of times in practice. He is also responsible for improving the method of rescue, having been "rescued" so often.

"*Oscar's*" Kaneohe SAR team is based near a picturesque oceanside community on the north side of Oahu. Its orange-striped helicopters are ready and waiting for calls for help. It happened 68 times during 1983 for an average of almost a half dozen SAR scrambles a month. The rate is running about the same for 1984.

Each SAR pilot averages only about 25 flight hours a month since most of his time is devoted to collateral duties. For example, Wellman as a SAR officer writes schedules and coordinates rescues. But he is also assistant airfield operations officer and alternate station classified material custodian. Of his multiple duties,

"We just toss him out of the helo and let him drift" . . .

he values SAR the most, and his unit has been involved in some memorable, rather unique SARs. Thanks to *Oscar*, they have been well-prepared.

His outfit was advised that a small fishing boat was burning 20 miles offshore. A SAR crew was on call and quickly became airborne. Soon they were over the boat and dropped two swimmers in the water. The boat was owned by Vietnamese fishermen who surprisingly didn't want to leave. It was good that the swimmers convinced them otherwise because the boat eventually burned and sank.

In another instance a Coast Guard C-130 had spotted a flare 22 miles from an adjoining island. A boat was foundering. The Coast Guard called Kaneohe SAR for help. Soon, the Marine helicopter was over the scene. Excited victims continued to fire flares rather close to the hovering rescue chopper. The helo used a loudspeaker to communicate to the crew on the half-sunken vessel, "Stop shooting flares." In six-to-eight foot waves on a flare-punctuated night, the crew was finally rescued.

Then there was the time the Zodiac, a rubber-pontooned outboard speedboat, took too sharp a turn and threw out its driver. A SAR helo on the scene saw the empty Zodiac keep turning in a tight circle only a short distance from the victim. There was concern that he might be injured by the prop if the turn became wider. So the first order of business was to stop the circling Zodiac. But how? The SAR crew came up with the right idea. It blew it over with air from the rotor. The way was then clear for a safe rescue, based on extensive previous practice picking up *Oscar*.

Unfortunately not all rescues have unique or even humorous aspects —

or happy endings. For example, a local command's helo went down in the water. The crew chief was thrown clear on impact.

"It was dark by the time we arrived at the scene," the pilot said. "Our swimmer went into the water and hooked the victim to the cable (as he had done with *Oscar* many times). We hoisted him and our swimmer to safety. The victim was treated for shock and a head injury while en route to shore and an awaiting ambulance.

"We went back to search for the two other crew members — the pilot and the copilot. Our search continued for 30 to 40 minutes longer before we broke off and went home. The Coast Guard and numerous other boats continued searching throughout the night. Two of our aircraft went back in the morning, but the two downed pilots could not be found."

The SAR swimmer plays a vital role in the rescue mission and gets a lot of practice with *Oscar*. Once on the scene, he goes into action immediately if sea state and visibility permit. It's his job to get into the water and pull the victim out. He's trained in fundamental first aid to be certain that the victim receives treatment while being flown to a medical facility.

Participating on a voluntary basis, the swimmer must be a water survival safety instructor or a first class swimmer. He has attended a four-week course which includes water rescue procedures and heavy physical training.

"The SAR missions are team efforts because we naturally can't get to the scene of an emergency without the pilots," one SAR swimmer said, "and we can't reach and rescue the



"OSCAR"

victim without the crew chief operating the airborne mechanical hoist. And naturally *Oscar* has played his role in our training."

A SAR crew chief has undergone a 90-day training program and has performed many water pickups to become qualified. He must fully understand the control box in the rear of the helicopter which is used for maneuvering the craft over the victim without the pilot's aid.

"Practice at night is also essential," one crew chief noted. "The pilots can't see the horizon in the dark. The crew chief has to practice dropping flares to create an artificial horizon and to mark a survivor's position."

Flying in the dark increases the hazards of SAR operations. It makes it tough to find people and objects in the water. (*Oscar* has been the object of many a night search.) Adverse weather makes a rescue operation much worse. There are rare occasions when a mission must be turned down because conditions are beyond the limitations of the crew and the helicopter to operate without probable loss of life or injury to the SAR crew.

But flying the HH-46As around the Hawaiian Islands is not always packed with danger and tension. On the contrary, the flights along the beautiful coastlines with magnificent bays and beaches provide a compensating feature of peacefulness with an ideal view of the sea and terrain below.

But what makes the SAR crew's day the best is the thanks received from the person rescued. The crew's practice with *Oscar* has substantially improved the chances of such a successful rescue.

Just A Quiet Day Around the Hangar

By Lcdr. Brendan J. O'Connell
VP-8

THE CO and his crew are home, deployment's officially over and virtually the entire squadron (except for a few stalwarts in maintenance) has a well-deserved day off. What could go wrong on a quiet day like today? Read on.

An electrical power cart was plugged into a P-3C to perform maintenance on the interior. A few minutes later, the power cable began to spit sparks and flames near the point where it was attached to the aircraft. An airman working on the outside of the aircraft saw the sparks and ran into maintenance control to spread the word. Seconds later, while patrolling the hangar, the squadron duty officer saw the sparks and pulled the fire alarm. The assistant squadron duty officer in the duty office knew that the fire alarm was not connected to the fire department and he alertly telephoned them. The fire department reacted quickly and so did the men of the squadron.

The chief petty officers in maintenance control ran onto the hangar deck and immediately grabbed fire extinguishers to fight the fire while directing the removal of aircraft from the hangar. Within five minutes, the fire was out, the aircraft opposite the incident aircraft was out of the hangar and the incident aircraft was ready to be moved. The quick reactions and fast thinking of the people on duty kept an incident from becoming a disaster. Damage was confined to a charred power cable, some melted rubber from the power cable connector on the aircraft external power receptacle and some soot on the underside of the P-3C's right wing. After cleaning the power receptacle and wing and checking the aircraft's equipment and internal wiring, the P-3C was as good as new.

What caused the fire? An examination of the power cable by the base's ground support equipment branch failed to reveal a specific cause but speculation centered on three possibilities:

(1) Frequently, people remove a power cable from an aircraft by pulling on the cable instead of on the connector which loosens the cable attachments inside the connector. This may have caused a gap inside the connector which led to sparking.

(2) Water from a heavy snowfall two days earlier may have gotten inside the connector and produced arcing.

(3) Part of the cable which was not charred had a deep cut in the insulation. Perhaps a similar cut near the connector could have gotten wet and shorted out.

We'll never know for sure that happened but several lessons can be drawn from this incident:

- Take time now to examine the fire extinguishers around your shop or office and make sure you know how to use them.
- When using an external power cart, thoroughly examine the cable and connector for cuts, loose prongs, dryness and general condition.
- When attaching or removing a power cable, keep your hands on the connector; don't pull on the cable itself.
- Remember that emergencies can occur at any time and, following Murphy's law, they are most likely to occur when you least expect them.

One might say we were lucky on this one but we were lucky because the people on the scene knew what to do in an emergency situation.

On rituals, phobias and preflights

By Lcdr. Dave Youngblood

THE sun is high and the horizon low as I sit slumped, form-fitted I should say, in the orange-covered, foam-filled cushion that a cost analysis said would do for a pilot's seat. The steady roar of the whirling disk above drowns my thoughts and connections to anything farther than the cockpit around me. Off to the east beyond the tabletop water of the eastern Med, I see a faint silhouette of the Shuf Mountains. The mayhem there seems imaginary as I sit in the serenity of clear blue sky, smooth sparkling water and enveloping sounds of the Seasprite — my Seasprite.

It is my Seasprite because I own it, I feel it, I hear its familiar hum and I sense its moods. I know almost before the oil gauge flickers that it will. I look down and wait for the needle to move because I sat in this cockpit so often and so long that I am a part of the machine, as much a part as "B" coupling or as the oil pump or as the new TACNAV computer that finds our way home for us — most of the time.

I am so much a part of this machine, suspending me here among the gulls, that I lose identity beyond. I fly this aircraft as confidently as I walk or write or know our wardroom breakfast menu, and I do because I've done it many times before — just like the preflight I did this morning. It's kind of hard to remember back to that preflight four numbing hours ago. Before the first launch and the five decks since and the eight passengers, 15 mail bags, 55 minutes in starboard "D," the grouchy air boss, the broken "ops-normal" reports with FFG, my six-month home.

I don't remember any particulars of that sunrise preflight except that it was — normal — right after breakfast; right before jumping on the chief because the paperwork wasn't ready, right after trying to decipher "combats" schedule of ships, parts and people I would see today. I'm sure things were normal because I checked everything as usual (and I was only interrupted twice). I don't specifically remember the temp tape on the "C" coupling pillow block. I don't specifically remember that slip mark painted on the azimuth — funny about that azimuth. Some time back a similar mark turned an H-2 into a scrap heap. That's why it has a slip mark now. I'm sure, though, that I checked the lower door latch on number two engine. I always check that latch because I had a friend once who didn't. As a matter of fact, I'm sure I checked all those things that I always check on every preflight because somewhere along, the way others didn't. I'm sure I checked those things because I don't intend to retire early from this cockpit that I've come to call home. I'm sure — but I just don't remember. ◀



FOD For Thought

By Peter Mersky
Approach Staff

I clamber up the ladder and strap myself in, making sure my camera is within easy reach. I haven't flown in a tactical jet for nearly a year and I'm not used to the cramped quarters in the TA-4J cockpit. No sweat! I could take it for an hour or so, and it would be a chance to get some great pictures.

The pilot starts up and begins his pre-taxi checks. On signal, we both raise our hands to indicate we're not touching anything in the cockpit so the ground crew can check the speed breaks and what not. Suddenly, the lens cap I'd so carefully stuffed in my flight glove slides out and clatters to the cockpit floor — somewhere!

For the next several seconds, while the lieutenant up front completes his checklist, blithely unaware of the personal turmoil behind him, I agonize over whether I should tell him about my cockpit FOD. He certainly needs to know about my little contribution to the cockpit clutter. But oh! The embarrassment! This isn't the first time I've flown backseat and I know better. Well, it's got to be done.

"Lieutenant," I call over the ICS, "I'm afraid I've dropped my lens cap in the cockpit. I can't see it." There's a pregnant silence.

"Okay, no problem. We'll just shut down for a while, and have one of the troops check it out." He's taking it well and I feel better. One of the mechs shoots up the ladder and peers into my cramped little corner of the world.

"I've got it," he calls after a couple of seconds. He reaches down and comes up with the offending little black plastic disc. We've only lost two minutes and start up again without further delay. Fending off my profuse apologies, the pilot denies any problem. Greatly relieved, I know I did the right thing, and although it was a dumb thing to have happen in the first place — and I will be more careful about my equipment in the future — it serves as a good lesson.

How many times has someone in your squadron dropped a pencil or pen in the cockpit, causing the aircraft to be downed? One squadron I was in saw our visiting CAG drop his pencil inside the cockpit after a flight, and our maintenance chief began pulling his hair out in clumps. We only had four airplanes on the det to begin with and flight time was at a premium. Muttering apologies, our wing commander knew what he had done. Fortunately, one of the

PRs found the pencil, thereby saving some all-night attention to the airplane. It happens.

While having his aircraft refueled, the pilot of an AV-8C placed his kneeboard in a convenient space (of which there ain't too much in a Harrier) between the ejection seat and cockpit bulkhead. After takeoff, he approached the area where he was to conduct confined area landing training, under the eyes of a Landing Site Supervisor (LSS). The young Marine settled into a hover and descended toward the landing pad. However, his position over the pad was not the best, and the LSS tried to get him to correct.

By this time the AV-8's thrusters were kicking up dust and debris, quickly throwing the pilot into an unexpected IFR situation. The LSS called for a wave-off, and as the Harrier pilot complied, he backed his aircraft into one of the pine trees which ringed the area. The plane immediately began to dip toward the ground, at which point the pilot ejected.

Although the seat left the aircraft, it was later theorized — without conclusive proof — that the cam striker on the seat had hit the forgotten kneeboard, and thus the barometrically-activated altitude mode indicator, which determines at what point the parachute is deployed due to altitude and airspeed, was given a false indication. The pilot struck the ground in a nearly horizontal position, without a properly deployed chute, and was fatally injured.

Recently there has been an increase of cockpit FOD-related mishaps and it's time we readdressed ourselves to this ever-present problem. This type of FOD is the most insidious; you've got to be aware of it. You just can't be complacent while unstrapping after a flight or while working around the aircraft. The most insignificant pieces of equipment become lethal weapons, contributing directly to the loss of aircraft and the lives of flight crew.

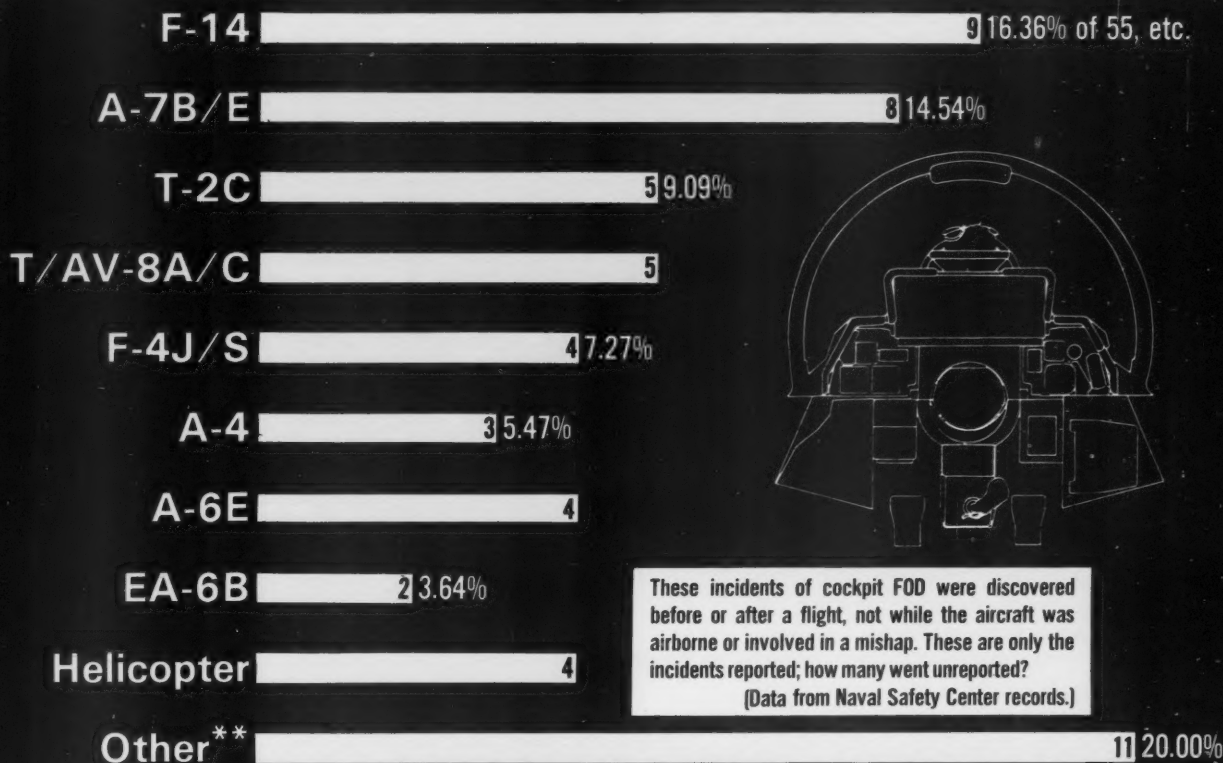
The helicopter community, of course, also has cockpit FOD considerations. Just because they fly slower, can autorotate back to the ground and have different missions than their fixed-wing brethren does not mean they're outside the danger envelope. How many times have you put your nice, big, fat bag full of charts, approach plates and quickie fixer tools down between your seats, within easy reach when you need it? Have you ever thought of the consequences of having something come out of that bag during maneuvers and wedge itself against the collective or maybe even the bag itself becoming FOD?

Then there are tools. A CH-46E mechanic found a screwdriver in the lower flight controls, under the pilot's seat. Investigation revealed that luck was certainly on the side of the many crewmen who flew that Sea Knight. The tool had been left after a routine maintenance check, and the aircraft had subsequently flown 30 times, accumulating 37 hours of flight time before the screwdriver was discovered. And speaking of screwdrivers, there's the instance where an F-4 pilot saluted the catapult officer, settled into his seat, and he and his RIO were shot off the ship. The Phantom driver was startled to find a wayward screwdriver doing its own launch past his helmet during the stroke. The tool had been dislodged from its resting place on top of the forward panel.

NAMDRP*

Cockpit FOD by Type

(January 1979 thru March 1984)



NUMBER OF INCIDENTS = 55

*Naval Aviation Maintenance Discrepancy Reporting Program

**C-1A, F/A-18, T-39D, OV-10A, P-3B

Nice!

Squadrons have found a surprising variety of small, cockpit FOD items through recent years, including pens, circular flight computers, Alligator clips, flashlights, putty and X-acto knives, combs, a *cheese slicer* and an *aircraft discrepancy book*! One unit has emulated the USAF by requiring its flight crews to inventory their personal items prior to manning up. A mimeographed sheet is provided and the crews check off the appropriate items such as pens, charts and wallets. Upon their return, the items are checked off before departing the flight line. This procedure is time consuming, but it goes far in breaking the FOD mishap circuit.

The U.S. Air Force's Tactical Air Command (TAC) has an active cockpit FOD prevention program which covers many aspects and individual responsibilities including the use of one-piece, pocketless and buttonless white overalls and individual lockers and bags for service line personnel and flight crew.

The expenditure of time — inspection time — is one of the few weapons you can use in the war against ANY kind of FOD. The phrase "attention to detail" is one we hear from our first day in the Navy, whether we are a pilot, NFO, crewman or maintenance trooper. And time spent in attention to detail, looking for FOD, unaccounted tools or personal items, is a wise investment. ◀

Gethomeitis

Anonymous

(get'hom itis). adj. military slang. 1. abnormal state or condition, excess, tendency obsession, etc., to proceed to one's domicile without due regard for one's own safety or those in the immediate vicinity.

32

IT had been a long carrier deployment, and we were *finally* ready for the flyoff. Everyone stayed up late and woke up early with the anticipation of *getting home*.

We briefed every eventuality for the flyoff. What if No. 1 goes down? What if the CO's plane doesn't make it? What if the first section of two is launched well ahead of the second section? After thoroughly weighing the flight gear and personal baggage to ensure weight limits were not exceeded, the crews manned up.

Everything went well with both launches and each join up. My second section of two was 20 minutes behind the first section and a set rendezvous point had been prebriefed.

Ten minutes prior to rendezvous, I lost my primary attitude gyro. *No problem*. Change the lead and press on!

Now the weather became a factor. Broken to overcast from 2,000 feet to 6,000 feet with isolated rainshowers (you guessed it) right at our rendezvous point!

Turn around while VFR? Never! This four-plane flyover was going to be done — *no matter what*.

The new lead was having a rough time maintaining altitude so I gave him some slack for sloppy airwork — not realizing the weather was getting progressively worse.

Completely IFR now, I closed up to maintain my *only*

altitude indicator — my lead, since my emergency gyro now had failed!

No gyros, IFR, flying form! And all to *look good*. Dumb? You bet! Nervous? *Uh huh!*

A sudden *heavy* rain burst caused me to lose sight of my lead. We broke according to our brief and now I had no attitude indicator, *in the goo*.

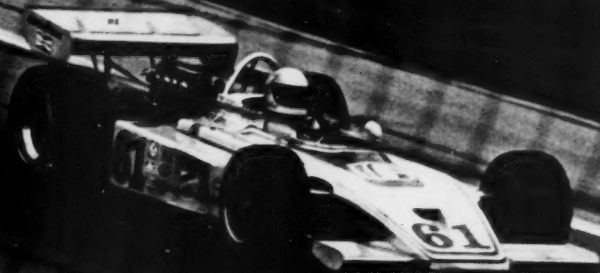
Five minutes of sweat and my lead called up that he had broken out in a clear area. After following his directions, I broke VFR on top.

We joined up *again* and proceeded with our flyover. The two sections were joined and then proceeded to home field. The weather was *only* broken and the flyover went like clockwork.

Here's a case where a thorough brief was passed up in favor of the disease that strikes at the end of *all* deployments, cruises and detachments away from home — GETHOME-ITIS.

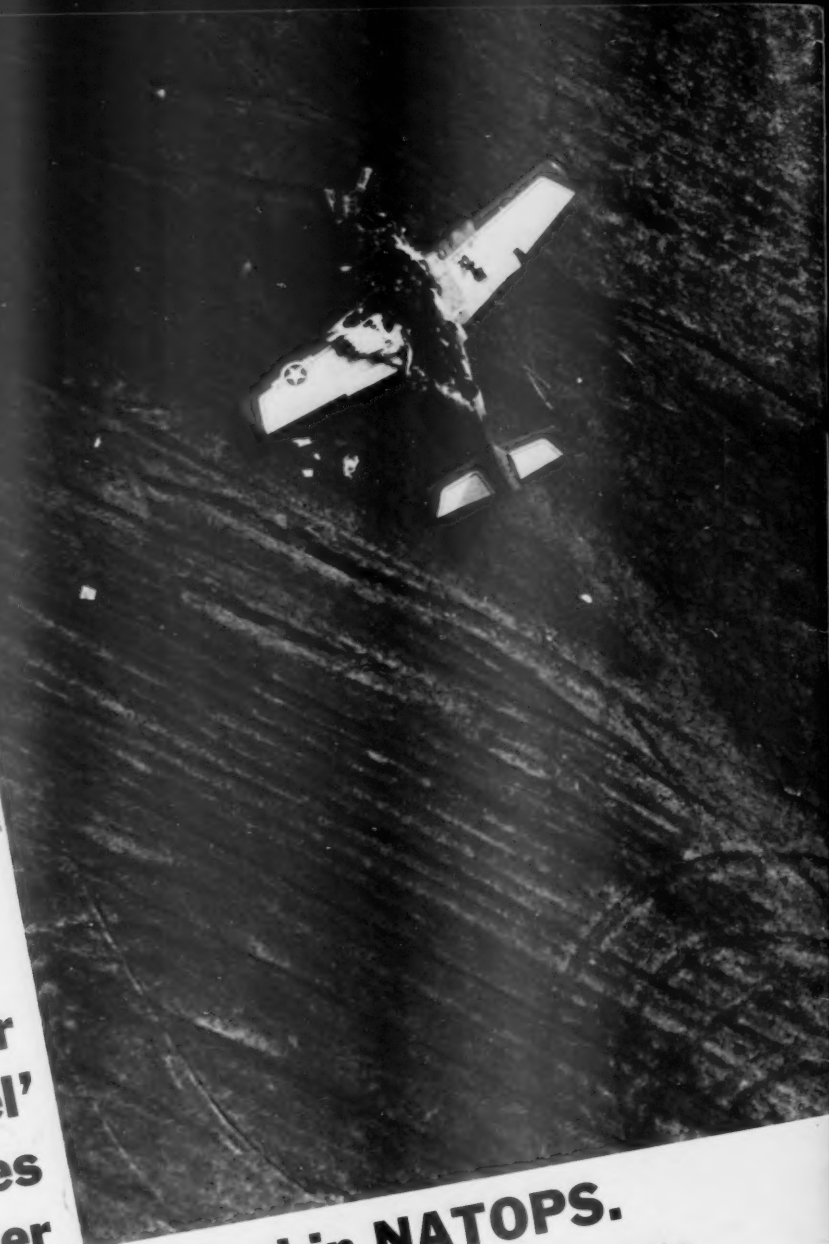
Where a *normal* pilot would pass on the trip — IFR, no attitude indicator and formation to return to his VFR recovery point, this "diseased" pilot pushed on. Did I learn anything? You bet! More importantly — will this help *you* self-evaluate your decision next time? ◀

**Leave racing to
PROFESSIONALS**



**Stay alive at
55**

Poster idea contributed by Capt. Kenneth A. Stansell, HML 107, MAG 26, MCASHI New River, Jacksonville, NC.



**S. H. stands for
'Sierra Hotel'
which describes
a maneuver**

**so daring it's not mentioned in NATOPS.
The same letters, S. H., are also an
abbreviation for the end result of that same
daring maneuver, smoking hole.
Return alive, we need you.**

